Attorney Docket # 5106-2RCE Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Alex MASHINSKY et al.
Serial No.: 09/939,917
Filed: August 27, 2001
For: Online Trading and Dynamic Routing of Electric Power Among Electric Service Providers

Examiner: Hamilton, Lalita M.
Group Art: 3691

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

SIR:

This is an appeal, pursuant to 37 C.F.R. § 41.37 from the decision of the Examiner in the above-identified application, as set forth in the Final Office Action wherein the Examiner finally rejected appellant's claims. The rejected claims are reproduced in the Appendix A attached hereto. A Notice of Appeal was filed on August 27, 2008.

The fee of $270.00 for filing an Appeal Brief (Small Entity) pursuant to 37 C.F.R. § 41.20 is submitted herewith. Appellants requests a two-month Extension of Time of the original shortened statutory response period to file this Appeal Brief. A Petition for the two-month extension of time is enclosed herewith along with the fee of $245.00 (Small Entity). Any additional fees or charges in connection with this application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

REAL PARTY IN INTEREST

The assignee, Arbinet-thexchange, Inc., of applicants, Alex Mashinsky and Chi K. Eng, is the real party of interest in the above-identified U.S. Patent Application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals and/or interferences related to the above-identified application at the present time.

STATUS OF CLAIMS

Claim 9 has been cancelled. Claims 1-8 and 10-21 have been rejected. Claims 1-8 and 10-21 are on appeal.

STATUS OF AMENDMENTS

There have been no Amendments filed subsequent to the Final Office Action.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a method for dynamically trading and distributing electric power and includes the steps of "collecting by a control node (10) bids and asks from buyers (40) and sellers (50) of electric power" (see page 11, lines 9-14, and Fig. 1; see also step (200) in Fig. 2 and page 12, lines 15-17), "dynamically matching by the control node (10) the collected bids and asks to form matches" (see page 11, lines 11-12; step (210) in Fig. 2 and page 12, lines 17-18), "receiving by the control node (10) information related to current supply and

demand conditions on an electric network through a feedback loop" (see page 11, lines 17-19), "generating, by the control node (10, 14), a route plan for routing electricity between the matched buyer and seller and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop" (see page 11, line 19 - page 12, line 5), and "configuring the electric network to route electric power in response to the control node (10) in accordance with the route plan" (see page 12, lines 19-21).

Independent claim 15 is directed to a system for dynamically trading and supplying electric power and recites "a control node (10) for receiving bids and asks from buyers (40) and sellers (50)" (see page 11, lines 9-14) and "matching the received bids and asks to form matched bids and asks" (see page 11 lines 11-12; and page 12, lines 17-18), and "dynamically updating the matched bids and asks in accordance with changes occurring in the bids and asks" (see page 13, lines 1-5), "a feedback loop connected between the control node (10) and an electric network (30)" (see the connection between node 10 and network 30 in Fig. 1; and page 11,lines 17-19), "wherein the electric network (30) is capable of routing electricity between buyers and sellers" (see page 11, lines 4-8), and "said control node (10) being configured for receiving information relating to current supply and demand conditions on the electric network through the feedback loop (see page 11, lines 17-19), generating a route plan for routing electricity between the matched buyer and seller (page 11, lines 15-17) and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop" (see page 12, lines 13-14; and page 8, lines 10-13), "and for activating switching devices connected to the electric network for switching a flow of electricity

in the electric network to effect the generated route plan (see page 8, lines 9-10; page 12, lines 2-4; and page 12, lines 13-14)."

GROUNDS OF REJECTION TO BE REVIEWED IN APPEAL

The rejection of claims 1-8 and 10-21 under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 6,598,029 (Johnson) in view of U.S. Patent No. 5,873,251 (Iino).

ARGUMENT

GROUP I (CLAIMS 1-8 AND 10-21)

Independent claim 1 recites "collecting by a control node bids and asks from buyers and sellers of electric power", "dynamically matching by the control node the collected bids and asks to form matches", "receiving by the control node information related to current supply and demand conditions on an electric network through a feedback loop", and "generating, by the control node, a route plan for routing electricity between the matched buyer and seller and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop".

Independent claim 15 recites "a control node for receiving bids and asks from buyers and sellers" and "matching the received bids and asks to form matched bids and asks", and "said control node being configured for receiving information relating to current supply and demand conditions on the electric network through the feedback loop, generating a route plan for routing electricity between the matched buyer and seller and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop".

Accordingly, the independent claims each require a control node that (1) receives the bids and asks, (2) matches the bids and asks, and also (3) generates a route plan for delivering electricity between matched buyers and sellers. The advantage of this invention is that the entity that generates the matches (i.e., the control node) knows the status of the resources of the electric network and can avoid matches that are impossible to deliver.

The combined disclosures of Johnson and Iino fail to disclose the claimed control node. Johnson discloses an auction service in which providers supply energy to end users in accordance with economic incentives resulting from a bidding process administered by a moderator (col. 6, lines 3-14 of Johnson). Each of the providers transmits to the moderator the rate it is willing to charge for supplying energy (electric power or gas) to be provided to the end users (col. 6, lines 24-28). Johnson further states that the provider may change its bids as often as it likes as market place demands for energy change or in response to competitors' bidding activities (col. 6, lines 40-42). The moderator sorts the bid information according to rules of the auction (col. 6, lines 43-49). The moderator then transmits selected portions of this information to a control computer associated with each end user (or group of end users) and participating providers (col. 6, lines 52-57). Each control computer gets the rate information and/or provider selection information from the moderator that pertains to the ends users with whom the control computer is associated (col. 6, lines 57-61). Each control computer selects those providers from whom the participating end users will be provided electric power or gas (col. 7, lines 6-10).

The moderator collects the end users actual usage to create usage reports to be transmitted to providers (col. 7, lines 24-27). The provider can adjust its bids to create more demand on a spot basis (col. 7, lines 34-40). Each provider manages power generation and/or power provisioning (or gas production and/or gas provisioning) in response to the usage reports

(col. 7, lines 41-55). Moreover, Johnson specifically discloses at col. 16, lines 49-56, that the provider is responsible for scheduling the delivery of the electric power or natural gas to the end user such as, for example, by notifying the regional grid controller.

Johnson fails to disclose that the moderator, which receives the bids and asks also generates a route plan to deliver the electricity. Rather, Johnson discloses that it is the grid controller of a DISCO (i.e., local distribution companies), not the Moderator/Control Computer, which requires the usage information to manage imbalances on its local grid effectively. More specifically, Johnson discloses a two step process in which the Moderator/Control Computer first selects the Provider to supply end users and then the selected Provider determines a route with a local grid operator (col. 16, lines 49-57). Thus, Johnson fails to disclose the claimed "control node" that (1) receives the bids and asks, (2) matches the bids and asks and also (3) generates a route plan for matched buyers and sellers that takes into account the supply and demand conditions received through the feedback loop, as recited in independent claims 1 and 15.

In response to Appellants' previous arguments, the Examiner states that the controller (moderator) is responsible for scheduling the delivery that takes into account the supply and demand conditions, depending on capacity utilization or other energy availability factors and refers to col. 3, line 53 to col. 4, line 16 and col. 7, line 24 to col. 8, line 10 of Johnson. However, these sections fail to disclose, teach or suggest that the control node that makes a match also generates the route plan. Rather, these Examiner cited sections specifically state that the seller and buyer are each individually responsible for scheduling a "contract path" to the transfer point (see, e.g., col. 3, line 62 - col. 4, line 4).

Iino fails to teach or suggest what Johnson lacks. Iino discloses a plant operation control system for a petrochemical plant. A main control 1 includes an electricity trade

cooperation system 1A, a plurality of plant production planning decision systems 1B, and a plurality of optimal operation control systems 1C (see col. 4, lines 37-41 of Iino). The plant generates electricity and surplus generated electricity is transmitted to an electric power system and sold to an electric power company (col. 4, lines 25-33). The electricity trade cooperation system 1A is connected to the plant and to an electric power company and receives various power parameters from each (col. 9, lines 1-10). The control systems are operated to decide the optimal electricity sale quantity distribution so that operation at the highest possible profit can be realized for each plant and the electric power of the lowest possible price can be supplied as a whole (col. 12, lines 43-47). The paragraph at col. 13, lines 11-25 of Iino states that the production plants can thus perform the same function as electric power generating plants. However, Iino does not provide any details regarding the generation of routes. Iino makes only the general disclosure that electric sale quantity of the local area including a plurality of factories and production plant can be adjusted to follow the demand (see col. 13, lines 11-15). The routes are presumably left to the electric power system 5 of the electric power company.

Since Iino fails to disclose details regarding how routes are generated, Iino also fails to disclose a control node that (1) receives the bids and asks, (2) matches the bids and asks and also (3) generates a route plan for matched buyers and sellers that takes into account the supply and demand conditions received through the feedback loop, as recited in independent claims 1 and 15.

In view of the above remarks, independent claims 1 and 15 are deemed to be allowable over Johnson in view of Iino.

Dependent claims 2-8, 10-14, and 16-18 are allowable for the same reasons as are independent claims 1 and 15, as well as for the additional recitations contained therein.

Dependent claims 8 and 20 further recite that the supply and demand conditions received through the feedback loop are used by the control node for dynamically matching bids and asks. The combination of Johnson and Iino fails to disclose this limitation because Johnson fails to disclose a feedback loop and Iino fails to disclose that a feedback loop is connected to a control node that matches bids and asks. Instead, Iino makes only the general disclosure that electric sale quantity of the local area including a plurality of factories and production plant can be adjusted to follow the demand (see col. 13, lines 11-15).

CONCLUSION

For the foregoing reasons, it is respectfully submitted that appellants' claims are not rendered obvious by and are, therefore, patentable over the art of record, and the Examiner's rejections should be reversed.

Respectfully submitted,
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CLAIMS APPENDIX

Listing of Claims:

1. (previously presented) A method for dynamically trading and distributing electric power, comprising the steps of:

(a) collecting by a control node bids and asks from buyers and sellers of electric power;

(b) dynamically matching by the control node the collected bids and asks to form matches;

(c) receiving by the control node information related to current supply and demand conditions on an electric network through a feedback loop;

(d) generating, by the control node, a route plan for routing electricity between the matched buyer and seller and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop; and

(e) configuring the electric network to route electric power in response to the control node in accordance with the route plan.

2. (previously presented) The method of claim 1, wherein said step (e) of configuring includes switching the flow of electric power in the electric network.

3. (previously presented) The method of claim 1, wherein said step (e) further comprises dynamically effecting the route plan.

4. (original) The method of claim 1, wherein said step (a) further comprises collecting the bids and asks in a spot market.

5. (original) The method of claim 1, wherein said step (a) comprises collecting the bids and asks via a wide area network.

6. (original) The method of claim 5, wherein said step (a) comprises inputting the bids and asks to the wide area network via respective buyer terminals and seller terminals.

7. (previously presented) The method of claim 1, wherein said step (e) comprises configuring an electric network comprising a high voltage direct current system.

8. (previously presented) The method of claim 1, wherein said step (b) comprises using the current supply and demand conditions received through the feedback loop for dynamically matching bids and asks.

9. (canceled)

10. (original) The method of claim 8, wherein said step (b) comprises continuously updating the matches based on changes in the bids and asks.

11. (original) The method of claim 1, wherein said step (b) comprises continuously updating the matches based on changes in the bids and asks.

12. (original) The method of claim 11, wherein said step (b) further comprises matching an equal share of the power from a seller with the lowest asking price to all bids of buyers to which the power is available.

13. (original) The method of claim 11, wherein said step (b) further comprises matching a share of the power from a seller with the lowest asking price to all bids of buyers to which the power is available, wherein the share is proportional to the amount of power demanded by the buyer.

14. (original) The method of claim 11, wherein said step (b) further comprises matching the ask of the power from a seller with the lowest asking price first to the bids of buyers with the highest amount of power demanded.

15. (previously presented) A system for dynamically trading and supplying electric power, comprising a control node for receiving bids and asks from buyers and sellers, matching the received bids and asks to form matched bids and asks, and dynamically updating the matched bids and asks in accordance with changes occurring in the bids and asks, a feedback loop connected between the control node and an electric network, wherein the electric network is capable of routing electricity between buyers and sellers, said control node being configured for receiving information relating to current supply and demand conditions on the electric network

through the feedback loop, generating a route plan for routing electricity between the matched buyer and seller and for simultaneously balancing loads and resources of the electric network based on the supply and demand conditions received through the feedback loop, and for activating switching devices connected to the electric network for switching a flow of electricity in the electric network to effect the generated route plan.

16. (original) The system of claim 15, wherein said control node is connectable to a wide area network for receiving the bids and asks from buyers and sellers.

17. (previously presented) The system of claim 15, wherein said control node comprises a deal maker module for matching said bids and asks and a route planner module for planning the route for effecting the matched bids and asks.

18. (original) The system of claim 17, wherein said control node comprises an accounting module connectable for determining the actual use of the buyer and determining the charge to the buyer.

19. (previously presented) The system of claim 15, wherein the electric network is a high voltage direct current system.

20. (previously presented) The system of claim 15, wherein said control node is configured to receive bids and asks in a spot market, and to dynamically match the bids and asks using the current supply and demand conditions received through the feedback loop.

21. (previously presented) The system of claim 15, wherein said control node is configured to dynamically generate the route plan.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None